

Entered at the Post-Office, Boston, Mass., as Second-Class Matter.

HATTERS,

English and American

SILK DRESS HATS,
OPERA CRUSH HATS,
FELT and CLOTH HATS
In Choice Shades.

TRADE

FURRIERS.

LEATHER HAT CASES, CANES, UMBRELLAS, and WALKING STICKS

Variety Unsurpassed

For STUDENTS' WEAR.

Agents for Heath's, White's, and Lincoln, Bennett & Co.'s ENGLISH HATS.

COLLINS & FAIRBANKS, D. Successors to COLLINS & FAIRBANKS, D. P. ILSLEY & CO.,

No. 381 Washington Street, Opposite Franklin, Boston.

James Notman,

Photographer to Class of '85, Institute of Technology, and Harvard '80, '81, and '85.

Only Studio in Boston, 99 BOYLSTON ST., Opp. Public Garden.

SPECIAL PRICES TO INSTITUTE STUDENTS.

JOHN EARLE & CO., TAILORS,

CHAMBERS, 330 WASHINGTON STREET, BOSTON.

The "Co-operative Discount" made as usual to all Students of the M. I. T., on Cash Purchases.

EARLY SELECTIONS SOLICITED.

DRESS SUITS LOANED FOR OCCASIONS.

Remarks We Hear Concerning Our Crawford Shoe.

- "The most comfortable shoe I ever wore."
- "Easier than shoes I have had made for me."
- "Can't understand how you do it."
- "No more \$12 shoes for me."
- "Hope you will keep your Crawford Shoe up to its present high standard."
- "Wouldn't have believed I would ever have worn a shoe costing only \$4."
- "How do you sell so good a shoe for only \$4?"
- "Have never had a moment's discomfort from your shoe since I first put it on,"
- "Can you do a profitable business on the Crawford Shoe alone?"

These Shore can only be obtained at

CRAWFORD SHOE STORES

Under United States Hotel, 611 Washington Street, 38 Park Square, 45 Green Street, 2164 Washington Street, 56 Main Street,

231 BROADWAY.

BOSTON.
BOSTON.
BOSTON.
BOSTON.
CONBURY.

CHAPLESTOWN.

- "Do you mean to say that even your \$3 Snoes are made of the best Stock you can buy?"
- "How can you sell your Hand-sewed Shoes at the same price of a machine-made shoe."
- "I have always had trouble in breaking in a shoe. Your Crawford Shoe requires no breaking in."
- "I have never before had a shoe fit my foot, unless it was made to order."
- "I find a new pair of Crawford Shoes as easy as the old ones I take off."
- "All my friends wearing the Crawford Shoe praise it."

BOUVE, CRAWFORD & CO., Makers of the Crawford Shoe and Proprietors of the Crawford Shoe Stores.

A. SHUMAN & COMPANY.



WE INVITE YOUR INSPECTION OF OUR LARGE AND VARIED STOCK OF

CLOTHING

For Young Gentlemen's Wear.

Manufactured by us from **Fine All-Wool Fabrics**, of both Domestic and Foreign make. All our garments are made in a style

EQUAL TO CUSTOM PRODUCTION,

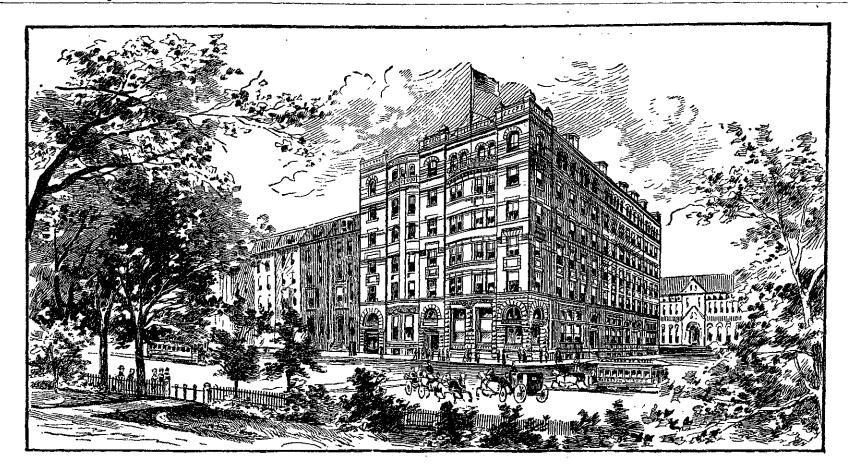
---AND A----

PERFECT FIT IS ASSURED

A. SHUMAN & COMPANY, Manufacturing Clothiers,

Washington Street, cor. Summer,

BOSTON.



* THE THORNDIKE *

European Plan,

G. A. & J. L. DAMON, Proprietors,

BOYLSTON STREET, OPPOSITE PUBLIC GARDEN, BOSTON, MASS.

PRIVATE DINING PARLORS FOR CLUB DINNERS.

BUY YOUR UNDERWEAR,

NATURAL WOOL, CAMEL'S HAIR, SILK, ETC.

FARLIN'S,

FINE FURNISHINGS.

ADAMS HOUSE.

Students will receive special attention and prices.

THE TECH QUARTERLY.

Published by the Students of

The Mass. Institute of Technology.

ITS CONTRIBUTORS ARE

The Corps of Instructors, The Advanced Students, and The Alumni.

The Leading Scientific College Paper in the Country.

Subscription Price, \$2.00 a year in advance.

Single Numbers, 60 Cents.

TREAS'R TECHNOLOGY QUARTERLY, MASS. INST. OF TECH.

For Advertising Rates, Address the Advertising Agent.

Hair Cutters to Tufts College and Boston University.

ALLAND BROS.

ARTISTS AND PHYSIOGNONOMICAL HAIR CHTTERS.

Hair Cutting "A LA POMPADOUR" a Specialty.

19 TREMONT ROW, SCOLLAY SQUARE,
Opposite Brattle St.

BOSTON

Massachusetts Institute of Technology,

BOYLSTON STREET, BOSTON.

FRANCIS A. WALKER, President.

This school is devoted to the teaching of science, as applied to the various engineering professions; viz., civil, mechanical, mining, and electrical engineering, as well as to architecture, chemistry, metallurgy, physics, and natural history.

Besides the above distinctly professional courses, the Institute offers scientific courses of a less technical character, designed to give students a preparation for business callings. A four years' course in biology, chemistry, and physics has been established, as preparatory to the professional study of medicine.

Modern languages are taught, so far as is needed for the ready and accurate reading of scientific works and periodicals, and may be further pursued as a means of general training.

The constitutional and political history of England and the United States, political economy, and international law are taught, in a measure, to the students of all regular courses, and may be further pursued as optional studies.

Applicants for admission to the Institute are examined in English grammar, geography, French, arithmetic, algebra, modern history, and geometry. A fuller statement of the requirements for admission will be found in the catalogue, which will be sent, without charge, on application.

Graduates of colleges conferring degrees, who have the necessary qualifications for entering the third-year class in any of the regular courses of the Institute, will be so admitted, provisionally, on the presentation of their diplomas, and will be given opportunity to make up all deficiencies in professional subjects.

The feature of instruction which has been most largely developed in the school is laboratory training, shop-work, and field-practice, to supplement, to illustrate, and to emphasize the instruction of the recitation and lecture room.

Surveying instruments are provided for field-work in civil and topographical engineering. Extensive shops have been fitted up for the use of both hand and machine tools, and a laboratory of steam engineering has been established as a part of the instruction in mechanical engineering. Several steam-boilers and steam-engines of various types are available for experiments and tests, as well as a large amount of special apparatus for measuring power, for gauging the flow of water, for tests of belting, etc. The laboratory of applied mechanics contains two testing machines, - one for ascertaining transverse strength, the other for tension and compression, - besides apparatus for time-tests on timber, for tests of mortars and cements, for tests of shafting, etc. The department of mining engineering and metallurgy has the use of laboratories in which the milling and smelting of lead, copper, silver, and other ores, in economic quantities, are regularly performed by the students themselves. The classes in architecture supplement the work of the drawing and designing rooms by the examination of structures completed or in course of erection, and by practical experiment in the laboratory of applied mechanics, testing the strength of materials and working out problems in construction. The Kidder Chemical Laboratories consist of a laboratory for general chemistry (288 places); a laboratory for analytical chemistry (108 places), together with a special room for volumetric analysis (20 places) and a balance-room with 22 balances; a laboratory for organic chemistry (30 places); a laboratory for sanitary chemistry (16 places); a laboratory for industrial chemistry (16 places); two convenient lecture-rooms; and a well-supplied library and reading-room. The laboratories are thoroughly equipped for the purposes of ordinary instruction, and they also possess excellent facilities for the promotion of original research. The Rogers Laboratory of Physics, the first laboratory in which instruction was systematically given to classes by means of elementary physical measurements conducted by the students themselves, is well provided with the needful facilities for laboratory instruction in both elementary and advanced technical physics, especially in the different branches of electrical engineering.

On the successful completion of any one of the four-year courses of the Institute, the degree of "Bachelor of Science" will be conferred. The degrees of "Master of Science," "Ph.D.," and "Doctor of Science" are open to persons pursuing advanced studies and conducting original researches. Special students are allowed to enter special divisions of any of the courses, on giving evidence that they are prepared to pursue with advantage the studies selected.

The fee for tuition is \$200 a year. Besides this, \$25 or \$30 are needed for books and instruments. There are no separate laboratory fees; only payment for articles broken is required.

For information, address JAS. P. MUNROE, Secretary.

PREPARATION FOR THE INSTITUTE OF TECHNOLOGY,



259 BOYLSTON STREET.

Wm. H. Ladd.

REFERENCE

Is made to the President and Faculty of the Institute in regard to the thoroughness with which pupils are fitted at

Chauncy-Hall School,

not only for passing the entrance examinations, but also for pursuing successfully their subsequent work.

FITTING for the Institute

has long been a specialty at Chauncy Hall.

The Sixty-first Annual Catalogue will be sent on application.

M. Grant Daniell.

CAFÉ WAQUOIT.

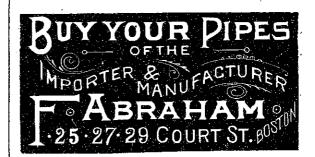
249 COLUMBUS AVENUE.

FIRST-CLASS RESTAURANT.
TABLE BOARD A SPECIALTY.

MONUMENT AND COTUIT OYSTERS.

OPEN TILL II P. M.

LOUIS FRENKEL.



PIPES, Etc.,

Of every description MADE and REPAIRED on the premises.

"Tech" Special.

WE ARE

Tailors to the Tech Co-operative Society.

EXCLUSIVE LONDON STYLES

For students' wear our specialty, with prices moderate, and credit allowed.

.: MACKINTOSHES IN ALL SIZES .:.

All goods warranted for excellence of make and superiority of colors.

MESSENGER BROTHERS & JONES, TAILORS AND IMPORTERS,

No. 388 Washington Street, Boston.



Tech

VOL. VIII.

BOSTON, NOVEMBER 8, 1888.

No. 3.

бне бебн.

Published on alternate Thursdays, during the school year, by the students of the Massachusetts Institute of Technology.

BOARD OF DIRECTORS, 1888-89.

F. W. HOBBS, '89, *Pres.* J. H. TOWNE, '90, *Sec.* L. M. HILLS, '90, *Treas.*

HOLLIS FRENCH, '89. C. H. MUHLENBERG, '91. F. I. DAVIS, '92.

EDITORS.

JAS. THORNTON GREELEY, '89, Editor-in-Chief.

J. LAWRENCE MAURAN, '89. | W. H. MERRILL, Jr., '89. J. L. BATCHELDER, Jr., '90. ALLEN FRENCH, '92.

J. LAWRENCE MAURAN, Advertising Agent.

Subscription, \$2.00 per year, in advance. Single copies, 15 cts. each.

FRANK WOOD, PRINTER, 352 WASHINGTON STREET, BOSTON.



INCE the beginning of the Institute, each class that has passed through its scientific halls has attempted to leave behind one or more enduring monuments to itself, in the shape of some well-established custom. Among many

that are credited to the Class of '88, there is one which has received much less notice than it deserves. We refer to the class photograph album.

Last year, after much opposition, a tolerably complete album was made up, containing photographs of most of the men of '88, and left in the President's room. The opposition was due, in a measure, to that natural antipathy for all that is new which has ever rendered hard the lot of the inventor; but it was against the intensely conservative spirit which characterizes every class in the Institute, and which was not lacking in '88, that the Album Committee had to struggle the hardest. The completion of the album, and the establishment of this custom, is due solely to the exertions of this committee.

We have taken occasion, thus early in the year, to speak of this, that last year's difficulties may, by timely advice, be at least lessened. The conservative spirit which opposes itself so strenuously to all innovations may have some salutary effects; but would it not be for the better, if before deliberately condemning any new project, we should first consider its merits? In a class album there can certainly be nothing objectionable. The idea of each member of the graduating class leaving a likeness of himself in a place attainable by all, cannot be but pleasing.

Let '89 go and do likewise, and thereby do credit to herself, and to a custom worthy of her.

HE eleven goes to Hanover Saturday, and o plays what will, perhaps, be the hardest game of the year. Dartmouth teams are always very hard to beat on their own campus, even if they play comparatively weak away from home, and so the result of the game there is very much in doubt. We know that Captain Duane has at present a quick, agile, and successful eleven, which has beaten very much heavier teams than themselves, and we hope the good record made in opening the championship season will not come to a standstill in Hanover.

The members of the eleven should remember that they are representing an institution of eight hundred men, all of whom are looking toward them for success. They should not be discouraged if they have to play an uphill They should not be discouraged at

not having the cheering of the Union Grounds to help them on. They should not be discouraged at anything, for discouragement means defeat.

As many men should accompany the eleven as can afford the time and money, for beyond the pleasure of the trip is the benefit of having somebody to cheer for Tech. at the game.

6 HAT Tech. should be a college of advancement surprises no one, but that it should go backward is a surprise to all. Reference is made to the clock; that is, the clock which used to be in Rogers corridor, and was We then so convenient to all the students. had something reliable upon which to depend, and everyone knew exactly how many minutes he had in which to reach a given recitation. But now each one has to rely on his own watch; that is, if he has one, or hasn't forgotten it, or is having it fixed, and so there is much confusion. To the Freshman, also, this is a great inconvenience. Last year he could spend many spare moments in the corridor, by taking exact observations of the dial at stated intervals; but now he has either to read through the ads. for old drill-pants, or else try to find a letter in the rack for himself. let's have the clock back again, and all will breathe more freely.

OW that everybody is wrapped up in football, and athletic stock is high in the market, it seems but a natural step to take a look at our other branches of physical culture, and say a word or two by way of advice to the Athletic Club and prospective competitors in its approaching meetings.

Heretofore some dissatisfaction has been felt by men hearing of a coming meeting at too late a day to go into training, thus greatly diminishing entries, and hence the attendant interest. We have excellent material, much of which has never been developed from this very oversight, and it is our desire and earnest hope by this very forehanded suggestion to

put the Athletic Club and our men of muscle on the qui vive, warning them never to put off till to-morrow what they ought to do to-day.

HETECH has a department of "Communications" which is getting very rusty. The heading of this column has not been used for six issues, and is not getting its share of the work. Either everybody is satisfied and can suggest no improvement in Institute affairs, or else the possibility of using The Tech as a medium in which to air one's opinions has slipped everybody's mind. If anything don't suit you write to The Tech about it!

Articles must bear the name of the writer, though not necessarily for publication.

HE enigmatic circulars with which the corridors of Rogers have recently been littered, have at least served their partial purpose of advertising the coming "Technique." The public bulletin defining, for the benefit of "Dear '92," a grind as "a gag, sometimes on a fellow-classmate," has had to be supplemented by several private and more elaborate explanations. Grinds of varying merit are pouring in, and the competition bids fair to prove a great success.

The result of the competition for a cover design is particularly gratifying. The accepted design, the best of fifteen entries, is a model of pen-and-ink drawing, and will not suffer in comparison with the work of the professionals, to whom it has occasionally been found necessary to resort.

Work on "Technique" is nearing completion, and the volume will go to the printer in a few days. The high standard which our annual has already reached will be fully maintained, and various additions and modifications are projected. The thickness of the volume will be somewhat increased, chiefly by literary matter.

Due attention is given to interesting and accurate statistics, and athletic and society

affairs, but the book is in no sense a catalogue reprint, nor is it, as in many colleges, simply a society picture book. Members of all classes are heartily invited to co-operate in making "Technique" of interest to everybody, and contributions, both literary and artistic, will be gladly received up to the time of going to press.

HE male portion of the human race is divided into three great classes; viz., Athletes, Men, and Grinds.

The first-named class make their living by athletics. Their mental capacities are, for the most part, undeveloped.

The "Man" is well developed physically, to attain which state a certain amount of time is spent in the gymnasium or the field. His mind is cultivated, his brain is clear, and by his strength he is enabled to pursue to great advantage his mental culture.

The "Grind" spends all his time in the storing up of mathematical formulæ; that is, until his physically undeveloped body gives out under the pressure, and he is unfit for further study. With some exceptions, who represent the extremes, most of us desire to reach the class known as "men." Eight months of our year are spent in the Institute, and it seems as though an institution, ranking as it does among the largest in the land, within the first half-dozen, in fact, could support something better than the "Hole in the Ground" for a gymnasium.

The very sarcasm in the above name, given it by the students, shows its uselessness. For instance, if out of over eight hundred students more than a dozen would use it, how could they be accommodated, lacking as it is in facilities for exercise and cleanliness. The attention of the Faculty and Corporation is called once again to the pressing need of a good gymnasium and an open field for out-door sports, in order that, as men, credit may be reflected upon our Alma Mater.

Thas been proposed by the Tennis Associates to try and secure indoor courts in some hall this winter, as Winslow's Skating Rink, for instance. The project is a good one, as the light, quick exercise which a sharp game of tennis gives, does much to drive away the cobwebs from the brain after a hard day's work at the Institute when outdoor exercise is impossible. The great question is, will the men support such a project. Of course a new assessment is necessary, and whether the men will pay such an assessment is an open question. Let some opinion be expressed on the subject.

To is probably nothing but carelessness that causes the janitor to leave the blackboards hidden behind the pillars in Rogers' corridor where he has placed them, on sweeping. It is, however, a serious cause of annoyance to the students, and is undoubtedly the indirect reason for so many poorly attended meetings. We trust that the janitor will bear this in mind in future, and would also suggest to those who place bulletins in the place in question, that at about ten o'clock (the time of sweeping) they take a turn in Rogers and see that their notice is where it should be, and not reposing in that most unattainable place behind the pillars.

HY can't we have that system in regard to exam's and term work which is being adopted in some other colleges?

The system is, that those students who get over a certain per cent during the term, say 85 per cent, are exempt from the examinations at the end of the term. This is much fairer to the student, and has been successfully adopted in other colleges. Its only tendency is to elevate the individual daily work of the student, and does not make *all* depend upon the examination, which frequently does but scant justice to the really honest worker.

That it would be a great improvement on our present system, there is no doubt.

The Laws of Motion Illustrated.

He'd just returned from college, In Physics learned and wise; When, in the yard a-washing clothes, The laundry maid he spies.

"My dear," he said, quite lovingly,
"Your cheeks are far too pale;
To redden them I know a way,
"Twas never known to fail.

"And now by Physics we are taught
We never can expect,
Without some good, sufficient force,
To cause the least effect.

"Of Motion's laws this is, my dear, The hardest and the worst; Permit me, then, to illustrate This law, that's called the first."

He stooped and kissed her on the cheek;
The red flush quickly mounted,—
Thus showing, too, the second law,
On which he had not counted.

She waited for a moment then,
Far too surprised to speak;
Then turned, and quick imprinted hard
Her fingers on his cheek.

And now his face grew red in turn,
While she heard him slowly sigh,
"I am a fool; I quite forgot
That the third law might apply."

Which?

OW it did rain! Just as if it had not been raining for the past month about as hard as it knew how. All the low lands were flooded, the river having risen quite above its banks. Great was the strain on the many dams which stretched across the stream at this point, and many fears were entertained lest they should prove unequal to the great strain put upon them. Consequently, the lower part of the village was deserted, for should either of the upper dams burst, that part of the village must of necessity be swept away. One of the inhabitants, however, did not think it necessary to move either himself or his family. This was the night watchman at the cotton mill just above the village. He thought that in case an accident happened he would be able to give warning in time to his wife and

children. As he trudged along to the mill that night the water ran in torrents down from his hat to his shoulder, and thence in huge rivers to the ground. Nothing could be seen through the darkness except here and there a light which shone dimly through the rain. Not a creature that could help it would be out on such a night. The mill was reached at last, and after a tour of inspection he settled himself by the fire in his little room on the ground floor, from whence at short intervals, as the night wore on, he would make short expeditions out into the storm. He had just come in from such a tour, and was shaking the rain from his oilskin coat like a dog who has been in swimming, when he was startled by a loud crash. He did not need to be told what it was; he knew only too well that the upper dam had burst, and as he rushed out a second crash told him of the advance of the flood and of the fall of the railway bridge. Not a moment is to be lost; his wife and children must be saved. Hardly, however, has he reached the corner of the building when he hears the shrill whistle of the night express as she rounds the curve. Unless she is stopped she will plunge into the gap left by the fallen bridge; but if he stops to signal the train he will be too late to save his wife and children. An instant he pauses, irresolute, and then with all speed he rushes forward.

The Merrimack Circuit.

[CONCLUDED.]

FTER a cool night and a refreshing sleep camp is broken, and they swiftly glide down the river to Lawrence, and carry into the Essex Company's canal to be locked out at the lower end, and continue down the river as far as Ward Hill.

In 1886 some of the party stopped at this place, and greatly to their surprise they were remembered by the natives.

Ward Hill is not a hard place to leave; so without a tear it is left the next morning, and

the cruisers are ready for the quick water below. The rapids are run, and Haverhill is passed with its humming shoe factories; and after a long run Newburyport heaves in sight. It is reached soon after, and after provisioning is left, to go through Plum Island River. With wind and tide Grape Island is quickly reached, and for half a dollar a small cottage is hired for the night.

Grape Island is a sort of third-rate summer resort, and there being strangers in town, some of the more youthful of the men celebrated the event by more than looking upon the wine that is red. They rolled the chariot along in song, and also in reality, by rolling large boulders across the piazza. It does not take much of a shock to shake a 20 x 20 cottage, and sleep inside was in consequence somewhat broken. Not being in an amiable mood after a broken rest, the canoeists started early, and glad to be rid of such an element, it did not take a great while to leave Grape Island far astern. "Yes," says a fisherman upon being asked where Ipswich is, "it's about two miles from that house over there." On dip the paddles, and the canoes shoot forward in answer,—but that house still looms up in the cold, cold distance. Ipswich may be two miles from that house, but it is ten to the house. The next man says, "O, it's just around that bend there." A dozen are rounded, vet no town; and the opinion that all men are liars is beginning to take strong hold, when the old town suddenly permits its dazzling beauty to be gazed upon by strange eyes. Here a carry of perhaps two hundred yards is made, and tintypes of the crowd taken by a much-dyed old fossil.

A few miles up the Ipswich Miles River enters it; so, following the map, the boats are nosed into Miles River. Oh, that name! Imagine, if you can, a Boston gutter in a heavy rainstorm, and you have Miles River vividly portrayed. Still up it the cruisers go, tugging, nauling, and carrying, until, according to map, he third bridge is reached.

Scene on Miles River.—"The major" standing in his canoe, "the Blink" up to his knees in water and mud; a fence across the brook before him, an axe in his hand. "Gentlemen, this is a fence across Miles River,—an obstruction to a navigable stream. Gents, it is a four-rail fence (whack!). Strange metamorphosis, it has but three rails (whack! cut! crash!). All a dream; there is no fence. Old Jo Horton and his team come into requisition for a three-mile carry to Chebaco Lake, where camp is soon made, and a day spent in washing the clothes, and so forth.

It rains for the first time in ten days, and yet, on, on, for there is an end to all things, and vacations do not last forever. Down the lake run the canoes, and into another brook leading to the Essex River. Ah! here is a bridge across the stream; what a pretty bridge it is, and so light, too, murmurs the skipper. So saying, he lifts a small rustic bridge across onto one side of the stream, allowing the canoes to proceed. Strangely enough he forgets to replace the bridge, too.

At last navigation is entirely blocked; there is no water to float the canoes; so in a driving rain the boats are shouldered, and a half-mile carry is made to the Essex River, where they are again launched. Passing the shipyard where so many fishing vessels are built, the course is shaped for the mouth of the river.

While passing Canova Point three shots ring out as a salute, dousing the hindermost canoes with shot. As the canoeists' hats are lifted in recognition, a hearty voice sings out, "Come in! we're just going to take something." Wet and cold, it is not long before they are responding in the most approved manner to the hospitalities offered by Messrs. G—g and T—y, the inhabitants of "Coot Cottage"; and a jolly cottage it is, with an exceptionally finely stocked buffet. Such a welcome makes a bright spot in our remembrance of the trip.

With the rain falling gently the course is regained for Annisquam, and in a short while Squam River is passed, letting Gloucester

Harbor loom up before our wet and cold senses. The Steamer Chaffee is taken, and after paying most exorbitant freight charges the party separates,—the Racine and Peterborough paddling to City Point.

Thus had the party made a circuit of about two hundred miles, within, at all times, forty miles of Boston, having traveled upon twelve streams, two lakes, and the ocean, and having made thirteen carries.

With nothing to think of but to-morrow's food and to-morrow's run, canoeists ought to be jolly fellows; and, indeed, they are. If you are inclined to doubt it, try it.

With only one day of rain, good food (for only once did the butter take the bit in its teeth), and a jolly party, the cruise was a perfect success, and a thing long to be remembered.

ILEX.

COMMUNICATIONS.

The Editors do not hold themselves responsible for opinions expressed by correspondents.

EDITOR OF THE TECH:-

It is singular what a difference exists between views from opposite sides of that unique fence which separates college undergraduates from the less-favored mass of mankind. Whereas the student never could understand why some men, from the moment of their final departure, seemed to lose all interest in their Alma Mater, and mentally vowed to prove his superiority to such by occasional droppings-in at the old place for a friendly word with the professors, and by subscribing to THE TECH at least a year or two longer, the alumnus finds all such pleasing hopes roughly brushed away by the force of new interests, change of residence, and yet more by the absence of any real link between his old school and himself. If nearness enables him to stop sometimes at the old stone steps, he finds them tenanted by strangers; in the laboratories, instructors greet him cordially, show some perfunctory interest in his present doings, andpass on. For him the bulletin-boards are blank. He may read mechanically the notices under

"FOURTH YEAR," but hac praterea nihil, and he is pervaded as nowhere else by the curious sense of being both "gone" and "forgotten." Should he drop in at the Union Grounds during a lively foot-ball game, he might there, indeed, poke up the ghost of his old-time enthusiasm to somewhere within sight of the yelling point; for if you put them both into canvas, skull-caps, and knickerbockers, and roll them impartially a score of times in the mud, there is not so much difference after all between Bumps '85 and Bruises '90,—especially at a distance. But when the victory is won, our prematurely aged observer has no friend among the returning heroes to thump on the back, and feels, among the triumphant but unfamiliar youths around him, a loneliness that is mighty. The next day he reads in the paper the names of the contestants,—as meaningless as those of the Trojans slain by Achilles. In short, although he may never miss his annual class dinner, often puts in appearance at alumni reunions, and keeps track of many old college friends, the connection of the average alumnus with the college, and his interest in the institution itself as it progresses, seem to be absolutely dead.

Now, this state of things is more natural than necessary. Interest, as a rule, increases or decreases in a direct ratio to knowledge; and unless the future work, or, what is still less likely, the small social circle of the ex-collegiate, chances to bring him again in contact with his old instructors, his knowledge of what is going on at Alma Mater is apt to become beautifully less. In a professional line he may hear from the heads of his own department through his trade journal. If he resides in New England, he will sometimes see in a Boston paper a few Tech. notes, of which one in five máy interest him. That is all; and the first paper containing such notes that he has seen for months, will very likely be the one containing fewest of those items which do interest him. Our friend Hadley, half a dozen years after graduating, wouldn't give a rap to know that the lectures on Metallurgy begin next month, or that the X Y Z Society has three representatives on the college eleven,—even though Metallurgy used to be his pet aversion, and the X Y Z his own stamping-ground. But he is interested somewhat to find that the labyrinth of papyrograph notes through which he used to struggle has been replaced by a compact text-book written by his old professor, and that the X Y Z has started a movement for all the societies to combine, and hire

a club-house. Of such more important and general facts (?) as these, let it be the mission of The Tech to inform him. But how?

The ideal graduate undoubtedly should, for the sake of its effect upon his own moral nature and the editorial pocket-book, subscribe annually to The TECH. Practically, the average graduate declines to cumber his abode with so much paper, or pay two dollars for the yearly privilege of sifting two hundred and fifty pages of chaff to extract the (to him) relatively small amount of wheat; but the average graduate would, I believe, be very glad to pay a trifle for the sake of receiving regular news of his Alma Mater, in the shape of an annual bulletin of such events and changes as would especially interest him. Then let one out of every sixteen numbers of THE TECH be published as an Alumni Number. In times past attempts have been made to get up an occasional Tech composed largely of contributions from former editors, W. R. Ingalls issuing a very successful one during the year of his management. Why not combine the two features? Every year, at such time as may give the editors the most leisure for its preparation, let a number be published containing such contributions from former editors and other alumni as may be obtainable, together with summaries of the work during the past year in athletics; number of games lost and won and league standing in foot-ball; ditto base-ball; standing of Institute records at the close of the last meeting, with names and classes of record holders; number of men in the whole Institute, in each class, in each society, in the cadet corps, and in the last torchlight parade. Let it contain notices of changes in the corps of instruction, and chronicle the introduction of new text-books and of new machinery, or important apparatus, notable alterations in the building as well as in the courses of instruction. Such a number might, with equal propriety, give the number of balls and hops held during the year under Tech. auspices, an index to the last volume of the Quarterly, the result of the presidential canvass of the students, the financial status of the Co-op, and a list of legacies received by the Institute since the year one. It would be well to add a list of M. I. T. publications during the year, such as appears piecemeal at present, and also (grouped by classes) a reprint of all such "Alumni Notes" as mentioned actual changes in address or occupa-All this, of course, would take room, and the purely statistical matter might conveniently be

printed as a supplement, and stitched in at the back. It would not, however, take so much of the compilers' time as might at first seem, for a large part of the figures would be taken bodily from the Institute Catalogue or back Techs. Neither would it interfere appreciably with "Technique," since the names of students still at the Institute would hardly appear,—the constant aim being to give such outlines and figures as would best answer the question, "What is doing at the Tech.? and how does it compare now with what it was when I was there?" To facilitate this, add a few sketchy accounts of events of special interest which have occurred during the year,—and we have a work which students and alumni alike will find worth both reading and preserving.

To introduce this to those for whom it is intended, let the annual prospectus of The Tech contain special reference to it, and the fact that a present or previous deposit of its retail price will insure its being mailed to the sender immediately on publica-Then supposing that, in consideration of the enlarged size, the price is raised to a quarter for that single number, and that for the next two or three years the prospectus be mailed to all graduates and to the later alumni: it seems to me eminently probable that the receipts from them would more than make good the loss on regular subscribers, especially after the Alumni Number had become an institution; but the financial side of the scheme is secondary, especially to a correspondent. I might, indeed, hint that a complete schedule of coming ball games, falling into the hands of a resident alumnus, would certainly not tend to decrease the gate receipts at such games; neither would a form of bequest in favor of our institution, delicately inserted at the foot of an obituary column, fail to remind the wealthy alumnus (if we ever have one) that "Life is short and cash is fleeting." good authorities say that the chief qualification requisite nowadays for a college president is to be a good beggar, every aspiring student should try by cultivation to secure it. Yet the main object of such a publication as this would be to assist the maintenance of an interest in Alma Mater that would render begging unnecessary; and this end must, at least, command respect. If the writer has seemed over-sanguine, due allowance must be made for one sufficiently far removed from Boston culture -and Tech.-to feel strongly the need of some such publication as that proposed. Whether unthoughtof objections to it arise, or new advantages for it present themselves, it is to be hoped that the Editors and Directors of The Tech will give the matter consideration.

L., '87.

A PATENT LOCK.

'Twas at a regatta ball they met—
The name of the place I quite forget—
He, one of Yale's victorious crew;
She, in a dress of crimson hue.
Both skilled in Terpsichore's art.

At parting he gave her his boutonnière, Which she fastened into her dress with care. The pin she used was a golden key, And the question he asked was, naturally, "Is that the key of your heart?"

She smiled and shook her pretty head:
"No; that's the key of his heart," she said.
Then glancing up in a saucy way,
"And it fits no Yale lock, let me say,
Tho' your crew is so smart."

-Advocate.

Noticeable Articles.

THE fact that "Gen. Ben Harrison, a candidate for President of the United States, found himself called upon to deny the charge of having said that a dollar a day was all that an American laborer should expect," somehow recalls to the memory of Gen. W. T. Sherman some episodes in the War of the Rebellion, which he proceeds to tell in a very racy way in the North American Review for October. His paper is entitled "Old Shady, with a Moral"; old Shady being a quaint old negro who escaped within the Union lines, and whose triumphant song of deliverance is given. The General's real subject is the negro race and its proper treatment, which he deals with in very blunt and downright fashion, and it need not be said that his "moral" is excellent.

In the same number Mr. Clarence King has an article entitled "Artium Magister," on the well-worn subject of classical education. Mr. King's estimate of what passes for a classical education in America cannot be called high. "There can hardly be conceived," he says, "a greater calamity befalling a young man born with a talent for literature, than to have him elaborately and expensively spoiled in an American classical college. Better far that he should be a cowboy, with the Bible and

Shakspeare in his saddle-bags, the constellations his tent, the horse his brother, than to have life, originality, and the bounding spirit of youthful imagination stamped out of him by a competent and conscientious corps of badgering gramma-This astounding over-valuation and overuse of grammatical analysis," he says, "recalls Alexandria during the Ptolemies, when formal grammar, although not positively a new invention, first rose into prominence, and made a bold push to fill the void in intellectual interest left by the great departed writers. . . . Poor Alexandria! She spun the cobwebs of theology across the one window that Christianity had opened for the soul to look unto heaven, and invented the 'Fathers' in place of the Apostles, while in letters she set the pedant on the vacant pedestal of the poet. She had infinite grammar but no art."

Just such he thinks are the results of the "pestilent American classical system in all its varieties. There are institutions where the glories of Hellas are unveiled from an Orthodox Congregational point of view, or where classic art may be surveyed across a Hardshell Baptist foreground. You may take your Plato under the stern eye of Calvin, or drain the cup of ancient literature beneath the benediction of an exclusive sequence of apostolic succession. Cheap colleges there are, where rusticity and shabbiness will pass unnoticed; or among the sons of plutocrats, with their yachts, and drags, and squanderings, there is another sort of classical atmosphere to be had at, say, a thousand a month. The choice is certainly wide enough; yet out of them all not a laureled young brow, not a poet's voice, not a solitary mortal man with the grace and glory of the classics upon him."

This is all very lively, and to a certain extent still true, and we have ourselves in our day said hard things enough about American classical education. But is not Mr. King just a little bit behind the times? Is he aware of the vast change which the so-called "elective system" is bringing about in our older colleges, although at Harvard it may be said just at present to be carried to an irrational extreme? An eminent classical teacher, not a mere pedant and grammarian, once said to me, "I could make real classical scholars of a few of my boys if I were not compelled to try to make classical scholars of all of them." Now, the "elective system" is emancipating him from that necessity, and it is a noticeable fact that the most flourishing of all the

old incorporated New England academies, heretofore exclusively an old-type classical school, has now a prosperous "modern side," and has this year sent us a dozen students.

On the other hand, it seems to me that Mr. King overlooks the vast progress which has been making in the methods of classical study itself. Certainly all American professors are not dry and barren pedants; witness the accomplished and learned Professor Goodwin at Harvard, sent out not long ago to Athens by an association of American colleges to establish an American school of classical archæology there. And, once again, grammatical studies themselves, under the reviving touch of the science of comparative philology, have grown into a genuine mental discipline, and are no longer the barren waste they were in those pre-historic days when we, and possibly Mr. King, studied the Latin grammar of old Father Adam himself.

It may be true, as Mr. King says, that "almost the whole American contribution to classical culture can be packed in a portmanteau," but to find fault with this is to find fault with America for not being a thousand years old. It is good argument for the improvement, but certainly not for the total abolition, of classical studies, as indeed the writer himself admits.

Scribner's for November contains a fine full-page portrait of the late Matthew Arnold, accompanying a paper by Augustine Birrell, the new writer, whose two volumes of bright little essays, entitled "Obiter Dicta," have attracted a good deal of attention.

W. P. A.

The torchlight was, in every sense of the word, a grand success, nearly six hundred men turning out, not to speak of the '88 carriage, the wagonette, or the two tallyhoes. The Oxford cap and gown was the admiration of everybody, attracting alike the attention of Maine's great statesman and the little girl on the sidewalk. The cheering and marching were excellent, and applause greeted the Tech. battalion at every corner.

We do not wish to be considered presumptious, but we, nevertheless, have heard it remarked that Tech. was largely instrumental in causing such a large vote to be polled in Massachusetts for the Republican ticket.

IRVING L'H. GARDINER.

Class of '89.

Whereas, It has seemed best to a Divine Providence to suddenly take from among us one of our number, Irving L'Hommedieu Gardiner, of the Class of '89, therefore be it

Resolved, That we, the Class, express our deep sorrow at the loss we have sustained—the loss of an earnest, bright, manly friend and classmate; one who was always to be found upon the side of truth and honor, and whose vacancy will always be deeply felt among us. That we desire to extend to his family our heartfelt sympathy in their great bereavement; and also be it

Resolved, That a copy of these resolutions be sent to the family of the deceased, and also published in The Tech.

G. M. BASFORD, Hollis French, J. P. B. Fiske,

WHEREAS, God, in his providence, has seen fit to take from our midst our beloved friend and classmate, Irving L'H. Gardiner, and

WHEREAS, We, the members of the Society of '89, have in his death lost one of our most beloved members, and one who, by his thorough gentlemanly qualities, genial manner, and conscientious performance of his duties, has endeared himself to all of us; be it

Resolved, That we most heartily deplore the loss of our classmate, and feel that one has been taken from us whose place can never be filled, and that we extend to his family our deepest sympathy in their bereavement. And be it further

Resolved, That a copy of these resolutions be sent to the family of the deceased, that they be placed on the Records of the Society, and that they be published in the Institute paper.

Z. W. BLISS, W. H. MERRILL, JR., JAMES WELD CARTWRIGHT, JR., For the Society.



Tech. vs. Amherst.

Not so many as had been expected turned out to see the first championship game, and the enthusiasm was of that quiet nature which tends but slightly to encourage the players. The game, however, was worthy of a larger crowd, and should have had more cheering than it received. It was well played throughout, and with the exception of a few fumbles and one or two poor tackles, was extremely brilliant. Amherst's rushline was heavier than our own, but lacked snap, and although playing well individually, failed in team work. Their quarter and fullback did by far the greater share of all-round playing.

Game was called at 2.10, Amherst having Tech., however, soon secured the ball. it on a fumble. Fine rushing by Germer, Godchaux, and Duane resulted in a touchdown by the latter at 2.16. The try for goal Amherst lined up at the 25-yard line, and not wishing to risk a fourth down kicked to Durfee, who made a fine rush which Willard made a touchdown at 2.20; no goal. Amherst braced up a good deal, the fullback making a very pretty run. Rice here distinguished himself by one of the prettiest tackles of the game. Duane rushed the ball well up to Amherst's five-yard line; Germer carried it over at 2.26; no goal. Amherst at once lost the ball on four downs. Duane's try for a goal from the field failed. Amherst gained some ground on the line up, and Crocker was injured and retired from the field. Again Amherst was forced to kick, and Highlands, Durfee, Germer, and Tracy carried the ball well up the field, Germer touching it down at 2.45; no goal. Amherst again lost the ball on the line up, and good work done by Dame, Godchaux, and Duane resulted in a touchdown

by the last at 2.55; no goal. Highlands and Willard did some pretty tackling just as time was called.

At the opening of the second half Godchaux made a long pass to Germer, who made a touchdown in just one minute, 3.11; no goal. Amherst lost the ball on four downs, and Duane made a touchdown at 3.15; no goal. Amherst fumbled the try for goal, and Dame made it another touchdown. The attempt to kick a goal from the field on Dame's punt-out failed. Tech. here lost the ball on four downs, and their quarter-back made a very pretty run which was only stopped by an equally pretty tackle by Durfee. Good playing by Durfee, Duane, and Dame carried the ball down near the Amherst goal-line over which Willard rushed it at 3.35; no goal. Amherst's attempt to return the try for goal resulted in a fumble, which Willard made a touchdown at 3.40; goal by Duane. The final touchdown was soon after made by Duane from which a goal was kicked. The ball went up the field, where Amherst lost it, and then regained it on interference. Good rushing by Duane and Tracy brought it back again, where an attempt to kick a goal from the field failed, just as time was called. The Tech. team was carried from the field by some of its many supporters.

Score: Tech. 48, Amherst o.

The teams were as follows: Tech., rushers, Dame, Tracy, Roberts, Rice, Highlands, Hamilton, Willard; quarter-back, Godchaux; half-backs, Duane, Germer; full-back, Durfee. Amherst, rushers, N. A. Smith, Crocker, Howard, Jacobs, Ballou, Harlow, Porter; quarter-back, Storrs; half-backs, Watkins, Daniels; full-back, E. P. Smith.

The best playing for Tech. was done by Duane, Germer, Godchaux, Durfee, and Rice; for Amherst, by Storrs and E. P. Smith.

Tech. vs. Yale.

On the 24th of October the football team went to Hartford and played a practice game with Yale on the Trinity grounds, which were

in a terribly poor condition after the day and a half of rain. Our team was crippled by the absence of several of the regular players, and soon after the game our centre was very much weakened by the injuring of Hammond. The Techs. were beaten badly, of course, but not much worse than was expected.

Our men played best in the first half, but could not do very much, owing to Yale's superior weight; the ball was fumbled freely by both sides, as everything was slippery. In this half Yale made six touchdowns and two goals, and the score stood 28 to o. In the second half Yale played a much better game, and several very good rushes were made by McBride and McClung. For Tech., Durfee made some very good kicks. Yale made many touchdowns and goals without our men scoring, making the score 68 to o.

The best work for Yale was made by Stagg, McBride, and McClung. Pierce, Godchaux, and Germer played well for Tech. The teams were as follows: Yale, rushers, Stagg, Hartwell, Pike, Corbin (centre), Heffelfinger, Morrison, Wallace; quarter-back, Wurtemburg; halves, McBride and McClung; full-back, Graves. Tech., rushers, Willard, Ross, Harvey, Hammond (centre), Highlands, Hamilton, Dame; quarter-back, Godchaux; half-backs, Pierce and Germer; full-back, Durfee.

Tech. vs. Harvard.

The eleven, minus Duane and Germer, went out to Cambridge on the 31st of October, and were badly defeated by the Harvard 'Varsity Team. The game was thoroughly unsatisfactory as far as Tech. was concerned, and listless, snapless playing prevailed; whereas Harvard played brightly and quickly, and indulged in roughness which at times developed into the most unwarranted slugging. Slade started off well, making several good tackles and two good rushes, but being hit by Cumnock he lost all his sand, and was replaced in the second half.

In the first half Harvard soon forced the ball by short rushes to the Tech. goal-line, and by good work by Lee, Harding, Sears, and Van Schalk secured 36 points before time was called.

The second half was shorter, on account of darkness. Tech. played a much pluckier game now, and held Harvard down to one safety and one touchdown, with no goal. Time was called with the ball at Tech.'s 25-yard line. Score: Harvard, 42; Tech., o.

The best work for Tech. was done by Godchaux, Durfee, and Kales; for Harvard by Harding, Cumnock, Lee, and Sears.

The teams were thus made up: Tech., rushers, Mead, Hamilton, Highlands, Price, Ross, Tracy, Willard; quarter-back, Godchaux; half-backs, Slade and Kales; full-back, Durfee. Harvard, rushers, Crosby, Carpenter, Davis, Cranston, Trafford, Van Schalk, Cumnock; quarter-back, Dean; half-backs, V. Harding and Lee; full-back, Sears.

Referee.—Mr. Kelly of the Harvard Medical School.

Tech. vs. Exeter.

Exeter, N. H., was the scene of a very lively and well-contested game Saturday last. The eleven was accompanied only by four men. Exeter played well throughout. Dudley, the director of the gymnasium, replaced Barbour, and was the life of the entire team. The Tech. team played loosely at first, but after Exeter had come two or three times within an ace of scoring, it braced up and played sharply to the close. Exeter's only score was due to a rebound from our goal posts, and to Dudley's agility in getting onto the ball.

Game was commenced at 3.15, Exeter having the ball. Good rushes by Dudley, Stickney, and Trafford carried the ball well down the field, where, on three downs, Trafford attempted to kick a goal from the field and failed. Duane took the ball under his arm

and stopped only at Exeter's 25-yard line, when Trafford made a pretty tackle. On three downs the ball was kicked to Trafford, who returned it to Durfee, when it was lost on four downs to Exeter, who kicked on the third down, Tech. doing the same. Exeter was given 5 yards on account of interference, when Tech. got the ball on four downs. Good rushing by Duane, Halls, and Godchaux, brought the ball nearly to the line, Duane rushing it over at 3.45 and kicking a goal.

Good rushes by Graves, Beattie, and Dudley forced the pig-skin nearly to Tech.'s goal-line, where they lost it to Tech: on four On the line up Duane was behind Tech.'s goal-posts; the ball was snapped back to him for a kick; it, however, struck the horizontal bar of the post, rebounded, and was covered by Dudley, at 3.55, giving Exeter one touchdown; no goal. Soon after, and just before time was called, Graves was badly cut in the head, and substituted by Brooks. The second half was played better by both Rushes by Duane and Durfee soon brought the ball to Exeter's 25-yard line, from which Duane kicked a goal from the field. This was the last of the scoring by either side; the ball going up and down the field, first with Exeter, then with Tech., each side kicking on three downs. Time was called with Exeter in possession of the ball in the centre of the field.

The best playing for Tech. was done by Duane, Durfee, Godchaux, Kales, and Halls; for Exeter, by Dudley, Graves, Hill, and Stickney.

The teams were as follows: Tech., rushers, Kales, Hamilton, Highlands, Weiss, Harvey, Halls, Willard; quarter-back, Godchaux; half-backs, Duane, Stearns; full-back, Durfee. Exeter, rushers, Hill, Bardwell, Stickney, Beattie, Turner, Erskin, Heffelfinger; quarter-back, Dudley; half-backs, Grouard, Graves; full-back, Trafford. Referee, W. H. Merrill, of the Institute of Technology; umpire, Mr. J. Western, of Exeter.

Tech. vs. Andover.

Monday, Nov. 5th, the team went to Andover and played the Phillips Academy. As the Tech. team was largely a substitute one, and the regular men were more or less crippled, it was not surprising that they were defeated, although it did seem as if a little more snap could have been put into the team work. In two or three cases men missed their signals, which resulted in loosing considerable ground. In view of the nearness of a championship game, more snap must be put into the practice games. As it is by their means a team does not grow "stale," as the expression is, it is imperative that they be played with as much vim as the regular games.

The rush-line must pay more attention to getting through and blocking. It is the duty of every man on the team to report for duty promptly, especially when a game is played away from home. If this rule was rigidly adhered to, the team would not have gone to Andover with no substitutes, which resulted in our having to play an Andover man as endrush when Willard was laid up. This substitution resulted in an extra six points for Andover, as their man materially helped his own side by judiciously blocking off Tech. men when they tried to tackle. The men should be severely censured who did not turn up at the Andover game. Now, above all things, the Tech. men want to uphold the honor of the Institute; and when the team allows itself to be beaten in a practice game with a preparatory school, something is wrong.

The game in detail is as follows: Andover had the kick-off, and by sharp, quick work made considerable ground. Although they lost the ball they soon got it again, and a touchdown by Upton resulted in ten minutes; no goal, score 4 to 0. Good rushes by Godchaux and Germer brought the ball to Andover's 25-yard line, when Andover got the ball on four downs. After that the ball was kept in the middle of the field until time was called. It was decided to play only a half-hour for the

second half, and on time being called, Andover soon rushed the ball down to Tech.'s 25-yard line. In a few minutes Andover made a second touchdown, from which a goal was kicked; score, 10 to 0. Time was called soon after with the ball in the middle of the field.

The teams were made up as follows: Tech.—rushers, Kales, Hamilton, Highlands, Weiss, Harvey, Willard, Hall; quarter-back, Godchaux; half-backs, Duane, Germer; full-back, Wardner. Phillips Academy—rushers, Hunt, Mowry, Cox, Spear, Upton, Townsand, Gilbert; quarter-back, Owsley; half-backs, Bliss, Sprague; full-back, Merchie. Referee, Mr. Dennison, Harvard; umpire, Merrill, '89.

FOOT-BALL SCORES.

Oct. 29, Harvard, 74; Dartmouth, o.

Oct. 31, Exeter, 12; Dartmouth, 10.

Nov. 1, Andover, 14: Dartmouth, 4.

Nov. 4, Yale, 58; University of Pennsylvania, o.

Nov. 4, Harvard, 72; Amherst, o.

Nov. 4, Worcester Tech., 49; Amherst Agricultural College, o.

Nov. 4, Williams, 48; Rutgers, o.

Nov. 4, Princeton, 10; Johns Hopkins, o.

Nov. 4, Cornell, 30; Union College, o.

Vorse, '88, the foot-ball player, was at the Yale-Tech. game at Hartford.

Already coaching parties and private car parties are being made up at Yale for viewing the foot-ball game at the New York Polo Grounds.

Dartmouth has lost seven of her last year's foot-ball team, and the same number from her nine.

The Williams Weckly says: "Foot-ball is a rough game, and must be played roughly to win."

On account of weakness, the Tufts' football team will play no more games.

Class and Society Organizations.

Class of '89: President, J. P. B. Fisk; Vice-President, V. P. Hobbs; Secretary, J. P. Gilbert; Treasurer, Ayer; Sergeant-at-Arms, W. B. Thurber; Executive Committee, Z. W. Bliss, S. Bartlett, N. Durfee, G. M. Basford, E. S. Hutchins.

Society of '89: President, Hobbs; Vice-President, French; Secretary, J. P. Gilbert; Treasurer, E. S. Hutchins; Executive Committee, J. W. Cartwright, Jr., Z. W. Bliss, W. F. Merrill, Jr.

Class of '90: President, G. Calkins; Vice-President, E. B. Stearns; Secretary and Treasurer, Poland; Executive Committee, Hamilton, Waite.

Officers of Parade: Major, R. G. Brown; Captains, Clapp and Moody; Lieutenants, Rogers, Babb, Glidden, Creden.

Society of '90: President, R. G. Brown; Vice-Presidents, J. H. Towne, Poland; Secretary, E. B. Stearns; Executive Committee, C. E. Ripley, G. Calkins, Creden, Roberts.

Society of K₂S: President, J. P. Gilbert; Vice-President, F. L. Hopkins; Secretary, E. Simpson; Treasurer, ——; Executive Committee, J. W. Cartwright, Carney, Pope.

Technology Cycling Club: President, Hadden; Vice-President, Hobbs; Secretary and Treasurer, Johnson; Captain, Hutchins; Lieutenant, Damon.

² G Society: President, A. Sauveur, '89; Vice-President, Wilson, '89; Secretary, Haskins, '90; Treasurer, Beaman, '89.

Technology Quarterly: Editor-in-Chief, Francis Hart, '89; Secretary, Benton Sturges, '90; Treasurer, W. B. Thurber, '89; Advertising Agent, J. P. Gilbert, '89; Business Manager, Geo. M. Basford, '89; Editors, J. L. Batchelder, Jr., '90, H. M. Goodwin, '90, C. W. Rise, '90, F. W. Swanton, '90.

Technique: Editor-in-Chief, Fred Metcalf, '90; Business Manager, H. M. Waite, '90; Editor for Societies, S. D. Flood; Athletics,

R. G. Brown; Artistic, H. B. Pennell; Editors for Statistics, W. Z. Ripley. F. M. Greenlaw.

Co-operative Society: President, Geo. M. Basford, '89; Vice-President, W. B. Poland, '90; Secretary, W. F. Merrill, '89; Treasurer, B. H. Mann, '90; Directors, W. B. Thurber, '89, H. W. Brown, '90, Blanchard, '91.

Athletic Club: President, Nathan Durfee, '89; Vice-President, R. L. Russel, '89; Secretary, J. L. Batchelder, Jr., '90; Treasurer, E. L. Hamilton, '90; Executive Committee, F. L. Dame, '89, J. H. Towne, '92, Allen French, '92, Edward Cunningham, '91.

Foot-ball Association: President, N. Durfee, '89; Vice-President, H. Clement, '90; Secretary and Treasurer, E. B. Stearns, '90; Executive Committee, F. L. Pierce, '89, E. L. Hamilton, '90, Edward Cunningham, '91, L. M. Hills, '90, Kales, '92; Manager, W. F. Merrill, Jr., '89; Captain of Team, W. M. Duane, '89.

Eastern Intercollegiate Foot-ball Association: President, Nathan Durfee, '89, Tech.; Vice-President, H. B. Blair, Dartmouth; Secretary, J. S. De Hart, Stevens; Treasurer, N. A. Smith, Amherst.

Tech. Tennis Association: President, W. E. Mott, '88; Vice-President, Benton Sturges, '90; Treasurer, W. B. Thurber, '89; Secretary, J. L. Batchelder, Jr., '90; Executive Committee, N. Durfee, '89, C. E. Ripley, '90.

Technology Photographic Society: President, Francis R. Hart, '89; Vice-President, E. M. A. Machado, '90; Secretary, F. W. Swanton, '90; Treasurer, E. W. Gannett, '89; Executive Committee, Officers *ex-officio*, and Geo. E. Hale, '90.

Architectural Society: President, J. Lawrence Mauran, '89; Vice-President, H. B. Pennell; Secretary and Treasurer, A. V. Edwards; Executive Committee, W. H. Kilham, H. W. Rice.

Technology Gun Club: President, Hollis French, '89; Secretary and Treasurer, James

W. Cartwright, Jr., '89; Vice-President, J. L. Batchelder, Jr., '90; Members, Hollis French, '89, J. W. Cartwright, Jr., '89, J. L. Batchelder, Jr., '90, E. S. Webster, '88, Francis Goodhue, '91.

Glee Club: President, A. H. Adams; Manager and Treasurer, E. M. A. Machado; Secretary, H. B. Roberts.

The state of the s

Hammer and Tongs: President, Hollis French, '89; Vice-President, W. E. Mott, '89; Secretary, Chas. M. Borden, '89; Treasurer, A. L. Davis, '89.

D. Y. D. X.: Members, J. Christobal Blume, Darragh de Lancey, Frederic H. Dodge, S. Douglas Flood, Cassius M. Foster, George L. Gilmore, John H. Glidden, Charles F. Koch.

M. I. T. Gun Club: President, Mr. Damon, '91; Secretary and Treasurer, Mr. Baldwin, '91; Members, G. C. Bishop, '90, E. B. Cleveland, '91, L. R. Sherman, '92, L. M. Weiller, '91, R. B. Metcalf, '91, W. P. Henderson, '90.

A postal card picked up in a rural office recently read: "Dear Min; The reason I did'ent laff when you laft at me in the post-ofis yestiday was because I hed a bile on my fase and Kan't laff if I laff she'll bust but I love you bile or no bile bust or no bust."

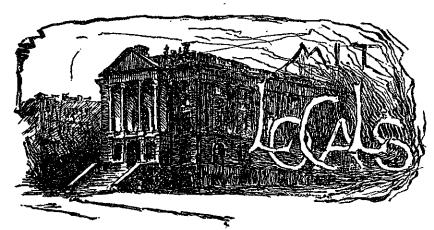
WHAT KILLED HIM.

Ipstein: "Hello, Heppenheimer! how vas tings since I seen you?"

Heppenheimer: "Tings vas pad, Ipstein! Peesness is tull, und my son Ikey, he vas died."

Ipstein: "Oh, dots pad! Vat he die off?" Heppenheimer: "He vas at the synagogue, und somepoty sung out, 'Job lots,' und Ikey vas gilled in the crush!"

A young lady, not a thousand miles from Boston, is suffering with an affection of "the octave (optic) nerve of her ear."



Mr. Harold Binney was in town recently.

The time for the best six grinds expired Saturday.

Evans Preston, '90, is spending the winter in Paris.

They practiced every night in the gym. for the parade.

Harvard men think we have a second Beecher in Godchaux.

Mary E. Stevens is around again with her "Look out for Russia."

Douglass, '91, will not be able to continue in the Glee Club this winter.

Ask the boys what they saw in the diningcar on their way to Hartford.

The series of "Rotch scholarship" drawings are soon to be exhibited in Room 21.

Durfee, '89, has of late been playing full-back on the eleven. Slade is resting.

There was only a fair attendance of Tech. men at the last Harvard-Tech. game.

The '92 battalion drilled with guns on Saturday, October 20th, for the first time.

Who is elected anyhow? The Tech. did its best to fill grandpa's hat with ballots.

Several graduates had a gaudily decked wagonette directly behind the Tech. coach.

A good number of Tech. students were present at the Coquelin Reading at Harvard.

A great many second-year Architects are now sketching from casts at the Art Museum.

Perhaps now that Gun Clubs have been started at Tech., we shall have artillery drill next year.

It was ludicrous to see the Amherst try to find and keep track of Godchaux in Saturday's game.

The Society of '91 seems destined to go out of existence unless the constitution be speedily revised.

Guy Kirkham, '87, attended the Tech.-Exeter foot-ball game, and gallantly led the cheering.

The Lowell Institute lecture on Gothic Architecture, by Mr. C. H. Moore, was well attended.

The Architects feel rather down on their luck over a recent severe criticism of their problems.

The Corporation and guests viewed the parade from the windows of Room 21, new building.

Mr. Jordan, '88, has returned from New York, where he has been studying bacteriology under the famous Dr. Prudden.

The Society of D. Y. D. X. held its regular dinner at Young's Hotel, Friday, Nov. 2, 1888. Mr. C. M. Foster was initiated.

Signor Gregori, 335, after a summer's touring in Italy, is again holding forth in front of Rogers with his chestnuts and pop-corn.

Mr. Kean, '89, is making a microscopical examination of the Cochituate water at South Framingham for the Boston Water Works.

The following notice appeared in a Boston paper some time ago: "Lost, A lot of keys on a string between Roxbury and Scollay Square."

Societies and other organizations desiring space in "Technique" should communicate with S. D. Flood, '90, at the earliest possible moment.

The competition for cover design for "Technique" brought out fifteen entries. The prize was won by "Fillet," who turns out to be H. B. Pennell, '90.

The very brief but decisive interview between Rice, '91, and Sears, of Harvard, was

greatly enjoyed by all the spectators at the last Harvard game.

Now is the time when the '91 Mechanical Engineer man comes into the lecture with his fingers half off, and bandaged up generally. Oh, blessed workshop!

About twenty men tried for the Glee Club on the 30th. Two of the best voices were those of two '92 men, who showed surprisingly fine tenor compasses.

All Institute amateur photographers should join the Photographic Society. An exhibition is held every spring, and diplomas awarded for the best work.

That strange disorder called "Peabo," has gradually spread through the Mechanical and Electrical courses, and now the Architects are complaining of it.

Hammond, '91, was injured on the knee in the Tech.-Yale game. The strain upon the tendons was so severe that it is doubtful if he will play again this year.

The legend on the Tech. transparancy last Monday night seemed to catch the popular mind, although most of our constituents repudiate the idea that our wants are so numerous.

An amusing feature of the afternoon practice on the campus (Union Grounds) is the tackling and half-back work of three large St. Bernards, who take an unusual interest in the game.

Perhaps it would be well to renew the offer for a Tech. national song. That Tech. is equal to this is proven by the excellent song by Gottlieb, '91, and Hathaway, '91, which was composed for the last '91 supper.

The thought of wearing an Oxford gown at the parade greatly alarmed one of the Freshmen; but upon being assured that he might wear both his jacket and overcoat underneath it, he consented to put his name in the box.

Atherton Loring, '90, has been awarded the \$5 prize for six best "grinds," by the judges in the "Technique" contest. Incidentally, it may be said that Mr. Loring appeared in a new winter overcoat the next day after he received the boodle.

The "Technique" is to print a list of the Fraternity men now in the Institute. To make this complete, all such will please leave their names, college, chapter, etc., in the letter-rack for Mr. S. D. Flood, '90. This must be done at once, as the printing is all but started.

は 100mm 1

Owing to the poor condition of the courts, and also from lack of funds, it has been found necessary to close the tennis courts somewhat earlier than usual. In the singles, Mr. Willeston, '89, beat Mr. Mott, '89, 6-1, 6-1, 6-0, thereby securing the first place. The doubles will have to be left unfinished.

Friday, October 26th, the '90 Geologists made an excursion to Roxbury, accompanied by Professor Crosby, for the purpose of examining the dikes and ledges of the puddingstone quarries on Tremont Street. The class were fortunate in having the services of an experienced quarryman, who proved of great help in explaining the "story of the rocks."

About a dozen members of the Society of '89 enjoyed the sights and sounds of "Nadjy" on the evening of Friday, the 26th. As none of the officers of the Society were present all formalities were dispensed with, and at the close of the theatre, after a brief free lunch had been discussed, the "cream of the Institute" wandered home so as to get up in time for the Amherst game.

A new Gun Club has been recently formed under the name of the M. I. T. Gun Club. All shooting men should join it, as the benefits obtained by shooting at flying targets cannot be too highly estimated. The Club proposes to hold a "shoot," open to all the members of the Institute, for a suitable prize. Applications for membership may be made to Damar, '91, or Baldwin, '91.

The Architectural Society held a meeting on Thursday, October 25th. A forty-fiveminute sketch problem was given; subject, a design for a doorway. Mentions were awarded as follows: 1st, H. G. Ripley; 2d, E. V. Edwards; 3d, E. M. A. Machado. Professor Chandler criticized the problems. Mr. Hooker read a paper on Byzantine Architecture, which he had translated from the French of Leon Chateau.

A careful canvass by the campaign committee gave the following figures:—

Harrison and Morton .	•	•		•	562
Cleveland and Thurman		•		•	219
Prohibition		•	•	•	7
Belva Lockwood		•	•		I
American Party	•		•		1
No choice					26
Total,					816

The action of the Amherst quarter-back in the championship game is, of course, inexcusable. No one has any business to wear clamps on his shoes in a foot-ball contest. We, however, attach the entire blame to the quarterback himself, and do not consider the management in any way responsible.

On Saturday, October 20th, the class in Zoölogy, accompanied by Dr. Gardener, made an excursion to Woods Holl, for the purpose of examining the fish hatchery and fine aquarium of the United States Fish Commission. The Marine Biological Laboratory, erected this year for the purpose of scientific investigation by a number of Boston gentlemen, Professor Sedgwick of the Institute being among the number, was also visited and proved very interesting. The trip was a success in every way; and although no one tumbled into the big fish-tank where the sharks are kept, as a certain member of the Class of '88 did last year, still enough excitement was furnished to make the participator in the excursion wish to go again.

Important. In a recent amendment to the Athletic Club Constitution the initiation fee was made 50 cents, while the annual assessment was made \$1, payable during the first two weeks in November. Notice will be given when the tickets are ready.

Professor Richards is furnishing the fourthyear Chemists and Miners with printed notes in place of the old papyrograph formerly used.

Why has the railing in front of the bird-cage disappeared?

A recent editorial in The Tech seems to have given a wrong impression, in referring to the lack of assistance from the classes of '90 and '91, in a literary way. We did not intend to be understood as reflecting upon any individual member of either class, but wished only to call attention to the general apathy which has, until lately, prevailed in both.

THE LOUNGER.

There are impositions and impositions, and one half of the world daily busies itself inventing more, to practice upon the gullibility of the other half. The category is practically endless, yet it might, in a general way, be classified into kinds,—as great impositions and petty impositions. The latter are the more common, and are worthy of the greatest contempt. Some people's lives are made up of petty impositions, and generally they are the ones who least suspect it. It is so easy to silently acquiesce to a false statement regarding one's self, and few people can resist an easy and apparently costless opportunity to pose in a good light. A friend supposes a desirable fact concerning yourself, and accepts the absence of denial as confirmation, and you let it go at that. Apparently you have gained something without committing yourself in any way, and, "really, there is no harm done." Everybody likes to generalize, and it is a favorite method with the petty impostor. It is so easy to convey a temporary impression of knowledge by means of a few well-put generalities.

The following, overheard in the corridor of Rogers, a few days since, and which gave rise to these sage remarks, is an illustration:—

A.: "You ought to see 'Little Lord Fauntleroy.' It is the best thing that has been at the Museum for some time!"

B.: "Is it? I'll go and see it. You have seen it, then?"

A.: "Er—no, I haven't seen the play, but everybody says it's great. It must be, if it's as fine as the book is!"

B: "Oh! it's adapted from a book, is it? I didn't know that! Is it a good book? What is it like?"

A: "Yes, it's fine! I—er—don't remember much of the plot now. You see, it's sort of a kid's book, and I read it when I was a little fellow!"

Mrs. Burnett's book was first published in 1886.

It seems to be the general impression that this year's "Technique" will far outstrip its predecessors in point of excellence. It certainly ought to. The peaceful self-satisfaction depicted on the mugs of its editors, now-days, can be nothing but the reflection of visions of glory and jingling dollars.

I understand that there will be several new features besides those indispensable with the nature of such a publication. However, don't it seem rather queer that the only prize offered, besides that for the cover, should be for "gags"? Why especially "gags" rather than something of real merit? Is it an advertising scheme? If it is, it is a good one. However, it seems a bit like trying to force the market, so to speak. Wit squeezed out of a man at a dollar a yard is apt to lose some of its "spiciness" during the squeezing process. We shall await with some anxiety the product of the man who "sits him down" and spurred on by that five-dollar sign in front of him, sets out to be "excruciatingly funny."

The political campaign has not been a very hot one in New England, and is drawing tamely to a close. Lord West's letter of advice to a naturalized Englishman, giving him "pointers" as to what would be for the best interests of England in the coming election, has proved fatal to Mr. Cleveland. The British minister is the Burchard of this campaign, and the worst of it is that he has made a blunder which explanation and denial cannot correct. Mr. Cleveland and his friends are helpless. They have sent West home in their anger, but that will not alter the fact that the highest English authority in this country has proclaimed, in a letter which he acknowledges, which election will most benefit It became a question whether such election would exert a balancing benefit here.

Burchard gave our Democratic party the Irish vote with his R. R. R. in 1884, and Lord Sackville West returned the compliment for Mr. Harrison. The country at large may laugh at the Englishman's simplicity, but some at least will thank him for his

honesty. It is not necessary for the Republicans to cuss him for meddling in American politics; the Democrats are doing that in good, hearty form.

To the Freshman: When you enter the Secretaries' office, never for a moment think of removing your hat. It is not expected of you, and, besides, to do so would indicate that you are afraid of the party behind the desk. Of course you are not. On the other hand, always take off your hat when you approach the "birdcage." You are expected to. The occupant is a keen student of human nature, and judges you by your umbrella handle. When you meet General Moore, say "How-dy do." When you pass the President in the corridor, give him the military salute. You might just as well get these little points right. Don't think that the gym. belongs to you. It is such a short time since the Sophs had it that they may feel some lingering claims yet. To dine either at Vercilli's or the Waquoit gives you good social status. Some prefer the latter resort, but it is from purely personal THE REPORT OF THE PARTY OF THE

Make it a point to join groups of upper classmen. They like to see that you are friendly. If you strike a social chill, get out!

When Hammer and Tongs indulge in a sidewalk entertainment express your approval, and offer timely suggestions to the managers. They like it.

Don't become saturated with the idea that the Pope runs the Institute. The religious department is across the street.

Why is it called the Chapel? We don't know exactly. We think it is so that your account books may wear a religious aspect, and still be truthful.

EXCHANGE GLEANINGS.

There is talk of discontinuing the Department of Arts at Columbia.

In the Andover-Exeter tennis match, Stearns of Andover won the singles, and Harrison and Soule of Exeter the doubles.

A new periodical, *The Collegian*, is to be published at Wakefield, Mass., devoted to the interests of the college world. The articles are all to be written by undergraduates. Subscription price, \$3.00 per year.

The Harvard Bicycle Club has challenged the Technology club to a team road-race, giving them choice of course, distance, and number of competitors. The date proposed is Nov. 11th.— Harvard Crimson.

PROMINENT TENNIS PLAYERS.

As the tennis season is ended, a review of the work of the prominent players of the United States will doubtless prove of general interest. Some estimate of the ranking of the leading players may be gathered from the following data. It is necessary to except the names of R. D. Sears, the champion up to this year, who was unable on account of ill health to play, and of Dr. Dwight, who played in but one tournament. The records of prominent players who have taken part in at least five tournaments are:—

	Tourna- Matches.			Per
	ments.	Won.	Lost.	cent.
H. W. Slocum, Jr., '83,	5	19	3	.86
H. A. Taylor, Harvard, '85,	7	15	3	.83
O. S. Campbell, Columbia, '91,	10	30	7	.81
P. S. Sears, Harvard, '89,	6	15	4	.78
E. P. MacMullen,	5	14	4	$\cdot 77$

With a degree of fairness the other crack players may be ranked as follows: Chase, Amherst, '87; Clark, Harvard, '83; Mansfield; Hall, Columbia, '89; Shaw, Harvard, '91; Wright, Trinity, '87; Hoppin, Technology, '87; G. A. Hurd, Yale, '90; Williston, Technology, '89; Hobart; Post, Columbia, '90; Miller, Yale, '85; S. Ludington, Yale, '87.

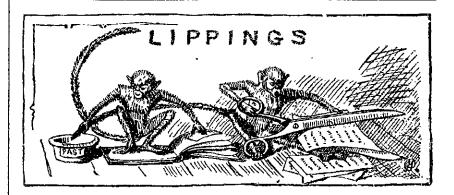
An examination of the list shows that a very large proportion of the experts are college men,—a noteworthy feature of this branch of athletics.—*Yale News*.

The following appeared in one of last week's Crimsons:—

The Tech. men threaten to push the Harvard men out of their position in the torchlight parade next week. The former are jealous because the latter have been assigned a place in line very near the head of the procession. If the Harvard contingent is as large as it is expected to be, the Tech. men will undoubtedly lose their courage before the night of the parade.

And the Cornell Era says:—

It is very noticeable how much the student publications of Yale and Harvard surpass those of all other colleges in literary qualities.



DE GUSTIBUS NON EST DISPUTANDUM.

Some like a hand that's long and slender,
Tipped with pink nails like a seaside shell,
And sing its praises so sweetly tender
In those amorous words poets love so well.

But others, thinking this deceit,

Lay their affections at the shrine
Of her whose hand is plump, petite,

And think that that's the hand divine.

But I to either of these things
Prefer—I speak without a blush—
A moneyed hand—well, say three kings,
An even full house, or a flush.

—Record.

THE ANNEX MAID.

In Fancy.

Haggard and weary, pale and wan,
Painfully studying on and on;
Swift chimes the midnight, and still the light gleams,—
Greek roots and dark symbols entangle its beams.
'Neath the shade, dark and grim, glares the spectacled eye,
From those lips, thin and pinched, comes a dolorous sigh;
For the maiden is weary of grinding.

In Reality.

Slily pretending to study so hard,
Playfully twirling her last summons card:
"What a fine afternoon,—just the time for a lark;
How I wish some nice man would take pity—But, hark!
There's Jack, with his buggy." Off trip the light feet,
And away speeds the vision, so fair and so sweet,
Of that maiden a-weary of grinding.
—Advocate.

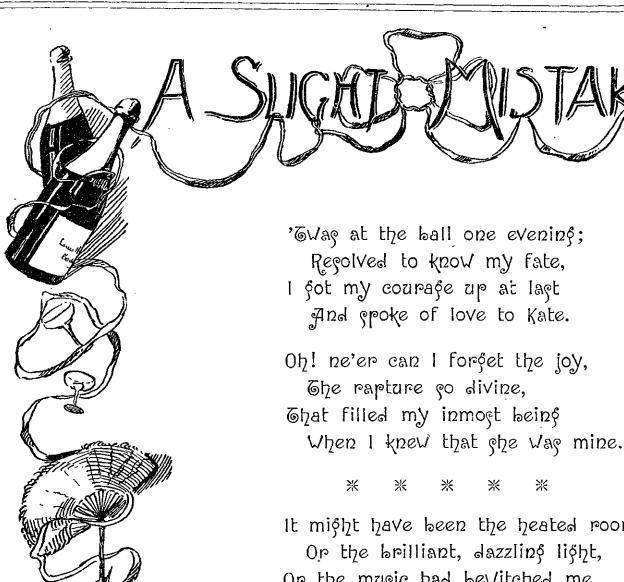
Dainty little maiden,
Tripping forth each day,
Bearing weighty volumes
On your learned way.

This is from the one that passes Going to his daily classes; He that looks with longing eye As you lightly pass him by.

Dainty little maiden,
With the nut-brown curls,
Would that I professor were
In your school of girls!

Passion plants I'd botanize; Lecture on the heart with sighs; Or, in just a class of two, Love's sweet Art I'd teach to you.

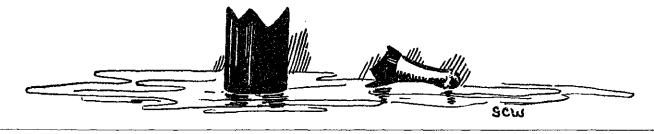
- Yale Record.



It might have been the heated room, Or the mugic had be witched me On that eventful night;

For next morning, on reflection, My spirits downward fell, When I found I was ensafed to Kate When I meant to propose to Nell.

G. H. Mumm.



There are loves of many kinds, Love of country, home, and ease; Some the love of pleasure binds; Some, in love, are bound to please.

One with wine is most in love,— Bright Madeira suits his mind; Others woman hold above All the gems of earth combined. Some the love of money tempts; These for money love exchange. Too much changing thus exempts From possessing too much change.

But the love which will outlast The exceeding love of pelf, When all other loves are past, After all, is love of self.

ALLEN SOLLY & CO.'S LONDON

High-Class Hosiery and Underwaar,

IN

Pure Lamb's Wool, Merino, Balbriggan, and Silk, in White, the Famous Brown and the Natural Gray.

All Weights and Sizes, 28 to 50 inches, at popular prices, at

NOYES BROS.

Blanket wraps for the nursery, the bath, the sick-room, or steamer travelling, for men, women, children, and the baby, at Noyes Bros.

Morning and evening wed ding outfits in shirts, collars, cravats, and gloves, a specialty at Noyes Bros.

English mackintosh coats for ladies and gentlemen, at Noyes Bros.

English silk umbrellas in gold, silver, and natural wood handles, ladies' and men's, \$2.75 to \$35.00, very rare and choice designs, at Noyes Bros.

English travelling rugs, for railway and steamer use, \$3.75 to \$50.00, at Noyes Bros.

English dressing-gowns, study coats, house coats, office coats, and long wraps, \$5.00 to \$45.00 in stock or to measure, at Noyes Bros.

NOYES BROS.,

Hosiers, Glovers, and Shirt Makers, WASHINGTON AND SUMMER STS..

BOSTON, MASS., U. S. A.



BLANKET WRAPS

FOR MEN, WOMEN, AND CHILDREN,

\$3.75 TO \$65.00.

DRESS SHIRTS

FOR DINNER PARTIES.

The present fashion of Shirts with Linen Cords, Embroidered Figures, and Spot Bosoms, may be had of NOYES BROS., most thorougly and elegantly mnde.

REPAIRING DEPARTMENT.

We have a Special Department for Repairing Shirts, Hosserv, Underwear, Gloves or any article belonging to gentlemen can be Laundered and Repaired at short notice at Noves Bros.

Genuine English Buck Gloves at Noyes Bros. Genuine "Coon's Fur" Gloves at Noyes Bros. English Silk and Cashmere Mufflers, \$1.00 to \$15.00 at Noyes Bros.

Choice Umbrellas and Canes for presents, at Noyes Bros.

English Holdalls; indispensable to travellers, at Noyes Bros.

London Tan Street Gloves at \$1.35, warranted, at Noyes Bros.

Mourning Gloves for street and driving, at Noyes Bros.

Dress Gloves, and special Morning and Evening Wedding Gloves, at Noyes Bros.

Health Bands, a protection to the bowels from cold, for men and women, at Noyes Bros.

Ladies' Silk Umbrellas in fancy colored stripes, plaids, and large figures, new, stylish, and desirable, at Noyes Bros.

The last London production in Ladies' English Waterproofs are to be had at Noyes Bros., \$7.50 to \$45.00, just opened.

Gentlemen's English Waterproof Coats, in the Ulster, the Argyle, and the McFarlain, every size and quality, at Noyes Bros-

Pajamas, and long flannel Night-Shirts, for the home or travelling; they are a safe-guard from colds,—at Noyes Bros.

New English Neck-wear, Collars, Cuffs, and Dress Shirts, in every possible style and quality at Noyes Bros.

Blanket Slippers for the sick-room, the bath, or dressing-room, for men, women, and children, at 75 cents per pair, at Noyes Bros.

Ladies will find most useful, sensible, and reasonable Christmas presents at Noyes Bros., and it's none to early to get them now.

NOYES BROS.,

Hosiers, Glovers, and Shirt Makers, WASHINGTON AND SUMMER STS., BOSTON.

T. E. MOSELEY & CO.,

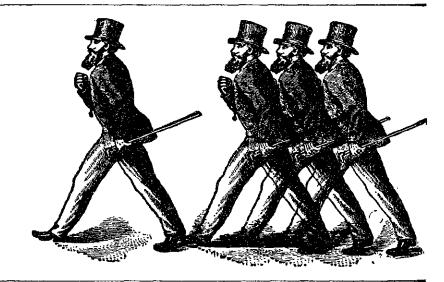
Boots and Shoes

469 WASHINGTON STREET,

Invite the special attention of gentlemen to their very large stock of Lace, Congress and Button Boots, from lowest prices to the finest grades. We are the original importers of the celebrated

WAUKENPHAST GOODS,

And have constantly a great variety for sale. Also, a large assortment of HERTH'S PARIS MADE BOOTS and SHOES. Large lines of Tennis, Base-Ball, and Gymnasium Shoes, some at VERY LOW PRICES.



<u>STUDENTS'</u>

SUPPLIES.

A FULL LINE OF

Mathematical Goods, Blank Books, Figuring Blocks, Stylographic Pens, etc., and all varieties of Drawing Papers.

Also, the LATEST NOVELTIES in CHOCOLATES, BON-BONS, and FINE CONFECTIONS.

. M. & J. W. COX, Wholesale and Retail Dealers in

Artists' Materials and Fine Stationery,

214 CLARENDON STREET, BOSTON, MASS.

Menus and Orders for Class Suppers and Dances.
PROPRIETORS TECHNOLOGY BOOK EXCHANGE.
ARCHITECTS', SURVEYORS', AND ENGINEERS', STATIONERY.

THE

: Electrical Review

OF NEW YORK.

A complete weekly review of events electrical, giving latest news from all parts of the world. Electrical novelties and weekly patent report.

No student interested in the subject can

No student interested in the subject can afford to be without it.

Electrical books at a discount. Apply to

S. L. COLES, '91,

-- or --

New England Office Electrical Review, 178 DEVONSHIRE ST., ROOM 58, BOSTON.

YOUNG MEN'S TAILORS.

CUSTOM DEPARTMENT.

The latest Novelties in Suitings, Trouserings, Ulsterings, Fancy Vestings, etc. Dress and Cutaway Suits a specialty.

READY-MADE DEPARTMENT.

Dress and School Suits, Overcoats, Ulsters, etc. A full line always in stock. Our own make, and of imported cloths.

DRILL JACKETS A SPECIALTY.

Special arrangements made for Bicycle, Camping Outfits, etc.

L. P. Hollander & Co.

Tailors and Outlitters,

82 no 83 BOYLSTON ST.

BOSTON.

FURNISHING GOODS.

English Neckwear a Specialty.

FINE SHIRTS TO ORDER and READY MADE, HOSIERY, NECKWEAR, ETC.

HATS AND CAPS.

Christy's English Derbys, and a full line of the Best American Makes.

Wool Caps and Gloves for Winter Wear.

DRILL CAPS, ETC.

Wife (tenderly): "Do you remember, Charles, how embarrassed you were when you proposed to me?"

KIMBALL'S

STRAIGHT : CUT : CIGARETTES

Unsurpassed in Quality.

Used by people of Refined Taste.



AT BRUSSELS, 1888.

HIGHEST AWARD

The Finest Smoking Mixtures are of our Manufacture.

FIFTEEN FIRST-PRIZE MEDALS.

WM. S. KIMBALL & CO.

ROCHESTER, N. Y.

Mr. Hardup: "No, dear; I've been so embarrassed since we were married that I have forgotten all about it."

TO STUDENTS

OF THE

Mass. Institute of Technology.

Will any member of the Classes that entered the Institute in September, 1886 or 1887, who purchased of us Mathematical Instruments, Set No. 2, kindly favor us with his name, and state price he paid for said Set.

WADSWORTH, HOWLAND & CO.,

82 AND 84 WASHINGTON STREET,

BOSTON.

PHOTOGRAPHER

CO-OPERATIVE AND CLASS OF '88,

M. I. T.

emple lace. THE FINEST STUDIO IN NEW ENGLAND.

Instantaneous Process.

Perfect Work.

WALTER 00KS & CO.

6 UNION STREET. BOSTON.

Stock selected Particularly for Young Men's Wear.

GERLACH & STEUER

(Formerly Jacob Gerlach).

Ladies' and Gents' Hair Cutting,

54 TEMPLE PLACE, BOSTON.

Manufacturer of Ventilating or Gossamer wigs and toupees.

Ladies' Hair Work of every various Children's Hair and in the riety. Children's Hair cut in the neatest style.

1888-1889. GOOD THINGS MUSICAL.

Whatever they are, the music to perform them, to understand them, to enjoy them, will be found in the immense establishments of OLIVER DITSON & CO:, who have on hand

Concert Songs, Gospel Songs, Sacred Songs, School Songs, Sunday-school Songs, Comic Songs, College Songs, Jubilee Songs, Popular Songs, Choir and Congregational Music, Tonic-Sol-Fa Music, Catholic Music, Anthems and Choruses, Part-Songs and Glees, Opera, Oratoric and Cantata Music, Collections of Music for Piane, Organ, and all other instruments, and in fact every all other instruments, and in fact every kind of Music that is made.

All this is in the shape of Sheet Music (3,000,000 pieces), Octavo Music (3,000 kinds), or of music collected in well-bound books (4,000 kinds). Send for Lists, Catalogues, Descriptions, and Advice. Any book mailed for retail price.

OLIVER DITSON & CO., Boston,

THEATRE NOTES.

At the Boston, Kiralfy's grand ballet and automaton dancers hold the boards for the current week. November 12th,—Dockstader's Minstrels appear for one week only. Now that good minstrels are so scarce, no one should miss this chance to see a really good thing.

The Globe opened this week with the great success of "The Paymaster," full of dramatic life and spectacular effect. Next week, Harry Lacy will appear in the "Still Alarm." Sale of seats begins Thursday, November 8th.

Frederick Warde, who achieved such a phenomenal success last year, appears for this week only at the Hollis Street. This is to be followed next week by Boston's favorite actor, E. H. Sothern, from the Lyceum Theatre, New York, in his celebrated play of "Lord Chumley." No one who has seen Sothern will miss this chance to see him at his best.

If you read this others will also. This space for reading notices for sale for advertising matter of all descriptions. For terms, write to Advertising Agent of THE TECH, Mass. Institute of Technology, Boston, Mass.

IMPORTER.

-11-

Charles Street.

BEACON STREET.

A large Stock of Foreign and Domestic Goods always on hand.

AGENT FOR

WINCHESTER, SON, & FLOWERS, No. 17 Maddox St.,

LONDON, W.

Boston Young Men's Christian Association, CORNER BOYLSTON AND BERKELEY STREETS.

Entertainments, Receptions, Evening Classes, Reading and Recreation Rooms, Library, Parlors, etc.

The Library offers superior facilities to Students as a place for study.

Membership Fee (including all of above privileges), \$2.00.

ASSOCIATION GYMNASIUM.

DR. G. A. LELAND, Medical Director. H. L. CHADWICK, Superintendent. L. F. L. F. SMALL, Manager.

Classes Morning, Afternoon, and Evening. Special attention to members not in classes. Medical and physical examinations.

Persons engaged in sedentary occupations or in study will find just the class of exercises to insure perfect health, as well as symmetrical development. New bathing facilities: Blackman exhaust ventilation. Terms, including Association Membership, Box, Measurements, Personal and Class Instruction, \$3.00 per year; \$5.00 for three months. Manual, 25 cts. VISITORS WELCOME.

W. C. Douglas, Secretaries.

A. S. WOODWORTH,

President.

BOSTON & PROVIDENCE R. R.

PARK SQUARE AND COLUMBUS AVE. EUROPEAN PLAN.

Open from 6 A. M. to 11.15 P. M.

Six Dollar Students' Tickets, \$5.00

J. G. COOPER, PROPRIETOR.

Autumn and Winter Opening, 1888-9.

DAVID MYERS,



175 TREMONT STREET, EVANS HOUSE, BOSTON,

RESPECTFULLY calls your attention to his large and well-selected stock, comprising the Latest Novelties, imported direct by him from London, and consisting of the latest European styles for high-class Tailoring.

THE

Brunswick

(American Plan.)
NEAR THE

Museum of Fine Arts, New Old South, Trinity (Phillips Brooks's) Church, and OPPO-SITE INSTITUTE of TECHNOLOGY.

BOSTON'S

Grandest Hotel

BARNES & DUNKLEE,

Proprietors.



THI

VICTORIA.

(European Plan.)

In the Center of Boston's Fashionable District,

THE BACK BAY.

Onened November, 1886, and within one week the *Traveller* said, 'It has established itself as the Delmonico of Boston."

STUDENTS'

Note-Books, Paper, Envelopes, Stylo. Pens, and Fairchilds Unique Pens, etc.

H. H. CARTER & KARRICK, 3 Beacon Street.

* ALBERT CAUTO

BRUNSWICK PAIR-DRESSING ROOMS. 20 Cts. a Shave. Six Shaving Tickets for \$1.00.

MANDOLIN, BANJO, AND GUITAR.— J. A. LeBarge, Director and Soloist of the Imperial Quartet, Teacher of Mandolin and Banjo. Edmund Foster, Soloist of the Spanish Students' Quintet and the Imperial Quartet, Composer and Teacher of Guitar music, 164. Tremont Street, Boston.

BOSTON FOREIGN BOOK-STORE

CARL SCHOENHOF

144 TREMONT STREET, BOSTON.

TOOL DEPOT.

CALL AND EXAMINE THE LARGEST ASSORTMENT

MACHINISTS' TOOLS

AND SUPPLIES

To be found in New England.

A. J. WILKINSON & CO.

184 and 188 Washington Street, Boston, Mass.



The Richmond Straight Cut No. 1 Cigarettes

Are made from the brightest, most delicately flavored, and highest cost Gold Leaf grown in Virginia. This is the Old and Original Brand of Straight Cut Cigarettes, and was brought out by us in the year 1875.

Beware of imitations, and observe that the firm name as below is on every package.

ALLEN & GINTER, Manufacturers, RICHMOND, VIRGINIA.

Frank Wood, Printer,

352 Washington Street, Boston.

FOR ARTISTIC USE in fine drawing,
Nos. 659 (the celebrated Crowquill), 290 and 291.
FOR FINE WRITING, Nos. 1, and 303 and Ladies', 170.
FOR BROAD WRITING,
Nos. 294, 389 and Stub Peint, 849.
FOR GENERAL WRITING, Nos. 332, 404, 390 and 604.

Sold by ALL DEALERS throughout the World. GOLD MEDAL PARIS EXPOSITION, 1878.

JOSEPH GILLOTT & SONS, 91 John Street, New York, HENRY HOE, Sole Agent.

MARVELOUS

Any book learned in one reading. Mind wandering cured. Speaking without notes. Wholly unlike artificial Systems. Piracy condemned by Supreme Court.

Great inducements to correspondence classes.

Prospectus, with opinions of Dr. Wm A. Hammond, the world-famed Specialist in Mind Diseases, Daniel Greenleaf Thompson, the great Psychologist, J. M. Buckley, D. D., Editor of the Christian Advocate, Richard Proctor, the Scientist, Hons. Judge Gibson, Judah P. Benjamin, and others, sent post free by Prof. A. LOISETTE, 237 Fifth Ave., New York.

STEAMERS PILGRIM AND BRISTOL IN COMMISSION.

Fares Reduced.

For First-Class Limited Tickets. other Points.

L. H. PALMER, Agent, 3 Old State House.

J. R. KENDRICK, General Manager. GEO. L. CONNOR, Gen'i Pass. Agt.

BARKER & STARBIRD,

55 Bromfield Street, Boston,

HEADQUARTERS FOR

AMATEUR PHOTOGRAPHERS'

Apparatus, Dry Plates, and Chemicals. SPECIAL RATES TO TECHNOLOGY STUDENTS.

Every Wednesday from New York.

Maury's Lane Routes to

QUEENSTOWN AND LIVERPOOL.

The steamers of this Line are celebrated for the regularity of their passages, and are, collectively, the fastest fleet crossing the Atlantic.

RED STAR LINE

Every Week, from New York.

TO AND FROM ANTWERP.

New, large and powerful steamers just added to the fleet.

line offers unusual inducements to passengers bound for the Continent. Capin rates include free passage Boston to New York.

THE ADAMS CABLE CODEX, our own publication, giving a cipher code for cable messages, of much value to travelers, can be had by sending 27 cents in postage stamps to our address, as below. Send for circulars of the trip. For sailing rates, cabin plans,

passage rates, drafts, and full information, apply to or address

E. A. ADAMS & CO., Gen'l Agents, 115 State, cor. Broad St., Boston.

FROST & ADAMS,

Importers of

DRAWING INSTRUMENTS

AND

Supplies for Students, Architects, and Engineers,

Designers' Colors a Specialty.—

SEND FOR ILLUSTRATED CATALOGUE.

No. 37 Cornhill, Boston.

J. C. LITTLEFIELD.

Eailor and Outfitter,

21 AND 23 BEACON ST., UNDER HOTEL BELLEVUE.

Exclusive London Styles for Young Men.

DISCOUNT MADE TO COLLEGE MEN.

DAME, STODDARD & KENDALL,

→Importers and Dealers in

FINE CUTLERY, OPERA GLASSES, THERMOMETERS,

Dog Collars, Fancy Leather Goods, 374 Washington Street, opposite Bromfield Street.

JOHN FARRELL.

TAILOR

No. 765 Washington St., Boston, Mass.

Finest line of Foreign and Domestic Fabrics constantly on hand, to be made in the best styles, at reasonable prices.

MILITARY SCHOOL JACKETS, CHEVRONS, and UNIFORMS,

AND FINE TAILORING IN GENERAL.